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Sequence Listing was accepted.

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217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: Wed Oct 24 13:27:30 EDT 2007

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Application No: 10511794 Version No: 2.0

**Input Set:****Output Set:**

**Started:** 2007-10-05 15:51:15.002  
**Finished:** 2007-10-05 15:51:16.476  
**Elapsed:** 0 hr(s) 0 min(s) 1 sec(s) 474 ms  
**Total Warnings:** 23  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 23  
**Actual SeqID Count:** 23

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
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W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

**Started:** 2007-10-05 15:51:15.002  
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Error code

Error Description

This error has occurred more than 20 times, will not be displayed

# SEQUENCE LISTING

<110> Center for Genetic Engineering and Biotechnology

<120> SPECIFIC ANTIBODY FRAGMENTS FOR THE HUMAN CARCINOEMBRYONIC ANTIGEN (CEA)

<130> 976-20 PCT/US

<140> 10511794

<141> 2007-10-05

<150> PCT/CU2003/000005

<151> 2003-04-28

<150> CU2002/0086

<151> 2002-04-09

<160> 23

<170> PatentIn Ver. 2.1

<210> 1

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

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<210> 2

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

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<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

<400> 3

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<210> 4  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: oligo

<400> 4  
actggatggt gggaagatgg a 21

<210> 5  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: linker I

<400> 5  
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1 5 10

<210> 6  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: linker II

<400> 6  
Gly Gly Gly Gly Ser  
1 5

<210> 7  
<211> 39  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: oligo

<400> 7  
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<210> 8  
<211> 63  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

<400> 8

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ggt 63

<210> 9

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

<400> 9

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tc 62

<210> 10

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

<400> 10

aaggaaaaaa ggggccgctt tcagctccag cttgggt 37

<210> 11

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

<400> 11

agagccgccg ccacctgagg agactgtgag agtgggt 36

<210> 12

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

<400> 12

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<210> 13  
 <211> 108  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: vector

<400> 13  
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 atctcagaag aggatctgaa ttcccatcat catcaccatc actaataa 108

<210> 14  
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 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence: oligo

<400> 14  
 gttgttcctt tctatttctca c 21

<210> 15  
 <211> 24  
 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence: oligo

<400> 15  
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<210> 16  
 <211> 241  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: scFv

<400> 16  
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 20 25 30  
 Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val  
 35 40 45  
 Ala Phe Ile Ser Ser Asp Gly Ile Ala Tyr Tyr Ala Asp Ser Val Lys  
 50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr Leu  
 65 70 75 80  
 Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala  
 85 90 95  
 Arg Val Tyr Tyr Tyr Gly Ser Ser Tyr Phe Asp Tyr Trp Gly Gln Gly  
 100 105 110  
 Thr Thr Leu Thr Val Ser Ser Glu Gly Lys Ser Ser Gly Ser Gly Ser  
 115 120 125  
 Glu Ser Lys Val Asp Asp Ile Val Met Thr Gln Ser Pro Lys Phe Met  
 130 135 140  
 Ser Thr Ser Val Gly Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln  
 145 150 155 160  
 Asn Ala Gly Thr Asn Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser  
 165 170 175  
 Pro Lys Ala Leu Ile Tyr Ser Ala Ser Ser Arg Asn Ser Gly Val Pro  
 180 185 190  
 Asp Arg Ile Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile  
 195 200 205  
 Ser Asn Val Gln Ser Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr  
 210 215 220  
 Asn Ser Tyr Pro Leu Val Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu  
 225 230 235 240

Lys

<210> 17

<211> 232

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: diabody

<400> 17

Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu Val Lys Pro Gly Gly  
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 20 25 30  
 Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val  
 35 40 45  
 Ala Phe Ile Ser Ser Asp Gly Ile Ala Tyr Tyr Ala Asp Ser Val Lys  
 50 55 60



Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr Leu  
 65 70 75 80  
 Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala  
 85 90 95  
 Arg Val Tyr Tyr Tyr Gly Ser Ser Tyr Phe Asp Tyr Trp Gly Gln Gly  
 100 105 110  
 Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Asp Ile Val Met  
 115 120 125  
 Thr Gln Ser Pro Lys Phe Met Ser Thr Ser Val Gly Asp Arg Val Ser  
 130 135 140  
 Val Thr Cys Lys Ala Ser Gln Asn Ala Gly Thr Asn Val Ala Trp Tyr  
 145 150 155 160  
 Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile Tyr Ser Ala Ser  
 165 170 175  
 Ser Arg Asn Ser Gly Val Pro Asp Arg Ile Thr Gly Ser Gly Ser Gly  
 180 185 190  
 Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser Glu Asp Leu Ala  
 195 200 205  
 Glu Tyr Phe Cys Gln Gln Tyr Asn Ser Tyr Pro Leu Val Thr Phe Gly  
 210 215 220  
 Ala Gly Thr Lys Leu Glu Leu Lys  
 225 230

<210> 18

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

<400> 18

catgccatgg ggaatccgaa gtgaagctgg tggag 35

<210> 19

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo

<400> 19

catgccatgg atcccggggt gatggtgatg gtgatg 36

<210> 20  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: diabody MS

<400> 20  
gactgggttc aattgacaag c 21

<210> 21  
<211> 255  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: diabody MS

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20 25 30  
Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val  
35 40 45  
Ala Phe Ile Ser Ser Asp Gly Ile Ala Tyr Tyr Ala Asp Ser Val Lys  
50 55 60  
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr Leu  
65 70 75 80  
Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala  
85 90 95  
Arg Val Tyr Tyr Tyr Gly Ser Ser Tyr Phe Asp Tyr Trp Gly Gln Gly  
100 105 110  
Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Asp Ile Ile Met  
115 120 125  
Thr Gln Ser Pro Lys Phe Met Ser Thr Ser Val Gly Asp Arg Val Ser  
130 135 140  
Val Thr Cys Lys Ala Ser Gln Asn Ala Gly Thr Asn Val Ala Trp Tyr  
145 150 155 160  
Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile Tyr Ser Ala Ser  
165 170 175  
Ser Arg Asn Ser Gly Val Pro Asp Arg Ile Thr Gly Ser Gly Ser Gly

180	185	190
Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser Glu Asp Leu Ala		
195	200	205
Glu Tyr Phe Cys Gln Gln Tyr Asn Ser Tyr Pro Leu Val Thr Phe Gly		
210	215	220
Ala Gly Thr Lys Leu Glu Leu Lys Ala Ala Ala Gly Ser Glu Gln Lys		
225	230	235
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<210> 22  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic amino acid sequence

<220>  
 <221> DISULFID  
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<400> 22

Phe Arg Ser Arg  
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<210> 23  
 <211> 4  
 <212> PRT  
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<220>  
 <223> Synthetic amino acid sequence

<220>  
 <221> DISULFID  
 <222> (2)..(3)

<400> 23

Val Lys Ile Lys  
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